

CLAIMS

1. Pollution control device comprising a pollution control element arranged in a casing with non-woven mounting mat disposed between the casing and the pollution control element, said non-woven mat being a non-intumescent mat comprising at least 90% by weight based on the total weight of the mat of chopped magnesium aluminium silicate glass fibers that have a number average diameter of $5\mu\text{m}$ or more and a length of 0.5 to 15cm, said glass fibers being needle punched or stitch bonded and said mat being free or substantially free of organic binder.
2. Pollution control device according to claim 1 wherein said glass fibers comprise aluminium oxide in an amount of 10 to 30% by weight, silicon dioxide in an amount of 52 to 70% by weight and magnesium oxide in an amount of 1 to 12% by weight based on the total weight of the glass fiber and wherein the weight percentages of aluminium oxide, silicon dioxide and magnesium oxide are calculated on a theoretical basis as Al_2O_3 , SiO_2 and MgO respectively.
3. Pollution control device according to claim 2 wherein the glass fibers are selected from the group consisting of E-glass, S-glass, S2-glass, R-glass and a mixture thereof.
4. Pollution control device according to claim 1 wherein the non-woven mat comprises two or more layers differing in glass fiber composition.
5. Pollution control device according to claim 4 wherein glass fiber compositions differ in the length of glass fiber and/or the average diameter of the glass fiber.
6. Pollution control device according to claim 4 wherein the glass fiber compositions differ in the chemical composition of the glass fiber.

7. Pollution control device according to claim 1 wherein the mount density of said non-woven mat is between 0.2 and 0.7 g/cm³.

8. Machine comprising a diesel engine and a pollution control device as
5 defined in any of claims 1 to 7.

9. Machine according to claim 8 wherein said machine is a motor vehicle and said diesel engine is a turbo charged direct injection diesel engine.

10. Machine according to claim 8 wherein said machine is a motor vehicle
10 selected from a truck, a bus or a low capacity passenger vehicle.

11. Method of treating exhaust gas from a diesel engine by subjecting the
15 exhaust gas to a pollution control device as defined in any of claims 1 to 7.

12. A mat for mounting a pollution control element in a casing of a pollution
control device, said mat being a non-intumescent mat comprising at least 90% by weight
based on the total weight of the mat of chopped magnesium aluminium silicate glass fibers
that have a number average diameter of 5µm or more and a length of 0.5 to 15cm, said
20 glass fibers being needle punched or stitch bonded, said mat being free or substantially free
of organic binder and being comprised of at least two layers of said chopped magnesium
aluminium silicate glass fibers, wherein said two layers are differing in their glass fiber
composition.

13. Mat according to claim 12 wherein said glass fiber compositions differ in
25 the length of glass fiber and/or the average diameter of the glass fiber.

14. Mat according to claim 12 wherein said glass fiber compositions differ in
the chemical composition of the glass fibers.

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